

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A friction brake assembly to act between a first component and a second component relatively moveable with respect to said first component, comprising:
a brake member connected to said first component,
a carrier connected to said second component;
a friction pad attached to said carrier for engagement with said brake member;
a first actuator including at least one shape memory alloy element, said first actuator being operable upon said carrier to move said friction pad into engagement with said brake member;
a second actuator including at least one shape memory alloy element, said second actuator being operable upon said carrier to move said friction pad away from said brake member; and
a ~~controller-control circuit~~ to operate selectively said first and second actuator.

2. (Previously Presented) A friction brake assembly according to claim 1 wherein a resilient element is interposed between said first actuator and said carrier to maintain a bias against said brake member.

3. (Previously Presented) A friction brake assembly according to claim 2 wherein said resilient element is a beam projection from said carrier.

4. (Canceled)

5. (Currently Amended) A friction brake assembly according to claim 1 wherein said shape memory alloy elements are tensile elements and said ~~controller-control circuit~~ changes the length of said elements to actuate said brake.

6. (Currently Amended) A friction brake assembly according to claim 5 wherein said ~~controller-control circuit~~ supplies an electrical current to respective ones of said elements to change the length thereof.

7. (Previously presented) A friction brake assembly according to claim 1 wherein said brake member is a drum rotatably mounted on said first component and said carrier is pivotally secured to said actuators for movement into or out of engagement with said drum.

8. (Currently amended) A friction brake assembly according to claim 7 wherein said carrier includes a member extending radially relative to said drum and said actuators act between ~~spaced locations on~~ said second component and said member, respectively.

9. (Previously Presented) A friction brake assembly according to claim 8 wherein said member is a flexible beam to couple resiliently said actuators to said carrier.

10. (Previously Presented) A friction brake assembly according to claim 8 wherein said actuators are tensile members formed from a shape memory alloy.

11. (Original) A friction brake assembly according to claim 10 wherein each of said actuators includes a plurality of tensile members arranged in parallel.

12. (Previously Presented) A friction brake assembly according to claim 11 wherein said tensile members are electrically connected in series and a current passing through said tensile members effects foreshortening of said tensile members.

13. (Previously presented) A friction brake assembly according to claim 7 wherein said carrier is pivotally mounted for movement about an axis parallel to but spaced from the axis of rotation of said drum.

14. (Withdrawn) A prosthesis having a pair of limbs pivotally connected on one another by a mechanical joint, an actuator connected between said limbs to effect relative rotation there between and a friction brake assembly as claimed in claim 1 acting to inhibit such relative motion, said friction brake assembly being operative upon said actuator to inhibit further movement in said joint.

15. (Withdrawn) A prosthesis according to claim 14 wherein said actuator includes a pair of relatively displaceable components to change the length of said actuator and said friction brake assembly acts between said displaceable components.

16. (Withdrawn) A prosthesis according to claim 15 wherein said components are interconnected by a screw thread such that relative rotation there between causes a change in the length of said actuator and said friction brake assembly acts to inhibit relative rotation.

17. - 20(Canceled)

21. (Withdrawn) A prosthesis according to claim 14 wherein a resilient element is interposed between said first friction brake assembly actuator and said carrier to maintain a bias against said brake member.

22. (Withdrawn) A prosthesis according to claim 21 wherein said resilient element is a beam projection from said carrier.

23. (Withdrawn) A prosthesis according to claim 14 wherein said shape memory alloy elements are tensile elements and said controller changes the length of said elements to actuate said brake.

24. (Withdrawn) A prosthesis according to claim 23 wherein said controller supplies an electrical current to respective ones of said elements to change the length thereof.

25. (Withdrawn) A prosthesis according to claim 14 wherein said brake member is a drum rotatably mounted on said other member first component and said carrier is pivotally secured to said friction brake assembly actuators for movement into or out of engagement with said drum.

26. (Withdrawn) A prosthesis according to claim 25 wherein said carrier includes a member extending radially relative to said drum and said friction brake assembly actuators and act between spaced locations on said other member second component and said member, respectively.

27. (Withdrawn) A prosthesis according to claim 26 wherein said member is a flexible beam to couple resiliently said friction brake assembly actuators to said carrier.

28. (Withdrawn) A prosthesis according to claim 26 wherein said friction brake assembly actuators are tensile members formed from a shape memory alloy.

29. (Withdrawn) A prosthesis according to claim 28 wherein each of said friction brake assembly actuators includes a plurality of tensile members arranged in parallel.

30. (Withdrawn) A prosthesis according to claim 29 wherein said tensile members are electrically connected in series and a current passing through said tensile members effects foreshortening of said tensile members.

31. (Withdrawn) A prosthesis according to claim 25 wherein said carrier is pivotally mounted for movement about an axis parallel to but spaced from the axis of rotation of said drum.